



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

All these things a nurse should be sure to know, so that, as far as in her lies, she should be one more earnest woman striving to make the world better for her having lived and worked in it. A wise man has given this quaint description of a perfectly educated man: "When a man knows what he knows, when he knows what he does not know, when he knows where to go for what he should know, I call that a perfectly educated man."

So with the nurse. When she finds a social problem with which she is not familiar, let her turn to the February number of the *JOURNAL OF NURSING*, and there read the list of books on this subject, on pages 386 and 387. She and her patients will, I doubt not, reap much benefit from her studies. One last word, and I have finished. Be careful, oh so careful, that your instruction is acceptable, that your pupil is anxious to be taught. Most mothers are anxious on these subjects; if one is encountered who does not care, first try to make her care (and this is a task, indeed), and then teach her what to do and how to do it.

RHEUMATOID ARTHRITIS

By MARY H. TUFTS

Farmington, Maine

Two standard medical books define this disease as follows: "Rheumatoid arthritis is an inflammatory disease of the joints, characterized by osseous formations about the articulations, loss of motion, and deformity." "Rheumatoid arthritis is an inflammatory disease of the joints, characterized by inflammatory and degenerative changes involving the structures of the various articulations; and by an overgrowth of the articular cartilages and synovial membrane, with destruction of those parts of the cartilages subject to interarticular pressure; and is attended by a progressive rigidity and deformity."

The name rheumatoid arthritis has a number of synonyms, *i.e.*, "Arthritis Deformans, Metabolic Osreo-Arthritis, Arthritis Pauperum, Proliferating Arthritis, Osteo-Arthritis, Rheumatic Gout, Nodular Rheumatism, and Chronic Rheumatoid Arthritis."

The proper classification of the different forms of the disease is difficult; and as many eminent orthopædists say, "Much is yet to be learned of this disease, but joint-diseases naturally divide themselves into two great classes—the inflammations and the degenerations; the partial, and the multiple forms. The recognition of this fact would do

much toward avoiding the confusion which now exists in regard to joint-diseases."

Dr. E. H. Nichols, of Boston, has said that "A tentative classification should be made, based upon the pathology. A perfectly satisfactory clinical classification is not possible." Drs. R. W. Lovett and J. E. Goldthwait, of Boston, teach us that some of the types of rheumatoid arthritis now recognized will, later, probably be recognized as stages of the same process; and that it is better to make an attempt to make a diagnosis of certain conditions, rather than of a particular disease, for the reason that the same cause may result in a varying number of processes, and a patient with a number of affected joints may present all the types, so-called. Dr. Reginald H. Sayre, of New York, says: "In this disease, I think that a number of different names have been assigned to the same pathological process; and very probably a varying number of processes have been called by the same name, but the most definite differential feature between the two great classes—the inflammatory, and the degenerative joint-conditions, is the course of the disease. In the former, the onset and course are definite, terminating either in recovery, or more or less permanent damage. In the degenerative forms, the onset is insidious, and the course is gradually progressive; involving many joints successively."

A consideration of these explanations should be of interest to nurses; and would help them to a more intelligent understanding of the condition of patients suffering from this disease.

The etiology of rheumatoid arthritis is doubtful. As predisposing causes may be mentioned heredity, bad hygiene, exposure, innutrition, injury, prolonged lactation, frequent pregnancies, menopause, grief, mental anxiety, tuberculosis, and frequent attacks of acute articular rheumatism. Women are more prone to the disease than men; and though it occurs among the young, in whom it is often very acute, it occurs most often in middle-aged women. Many physicians believe that the neurotrophic theory of the disease describes the phenomena best, *i.e.*, that there is some lesion of the spinal cord, primary or secondary, to peripheral irritation; and the result of uterine, or traumatic diseases, and that the early atrophy of the muscles, the contractures, skin-pigmentations, local sweatings, and the symmetrical distributions of the joint-disease, are evidences of this lesion in the spinal cord. The theory is also that the nerve-irritation affects the vaso-motor system; that it causes anæmia, a depraved nutrition, and a starvation of the special centres in the spinal cord; and the joint-dystrophies are secondary to

the spinal lesion. Other eminent orthopædic men believe the disease to be of infectious origin. Drs. Lovett and Goldthwait, of Boston, have found infections of low grade, associated with numerous cases of "fringe formations" in the joints; and believe these infections to be one of the causes of fringe-formations. Intestinal auto-intoxications and infections from chronic inflammatory and suppurative conditions are believed by some to be a cause.

The pathologic anatomy of the disease is quite clearly defined. All the structures composing the joints share in the pathological process. At first, the affection is attended by hyperemia of the synovial membrane, and increase of the synovial fluid. This is followed by proliferation of its cells, with subsequent formation of villous or nodular outgrowths. These villous outgrowths are termed "fringe formations," or the term is also applied to the hypertrophy of the ligamenta alaria, or fringes, which normally exist on the sides of the ligamentum mucosum, and are attached to the sides of the patella. After the villous or nodular outgrowths are formed, the capsular-membranes become irregularly thickened, and the synovial fluid decreases. As the process progresses, the internal ligaments of the affected joints are destroyed; thus permitting dislocations.

The interarticular fibrocartilages become ulcerated, and disappear; as do the cartilages covering the ends of the bones; thus exposing the ends of the bones at their articular extremities, which become smooth, eburnated, and enlarged. The villous nodules become ossified, and the periosteum forms new bone. These ossified villous nodules are sometimes termed "joint mice" or "osteophytes;" and may become detached into the joint-cavity, and cause extreme suffering and disability; and are then termed "loose bodies" of the joints.

The advanced cases have very greatly thickened ligamentous and fibrous structures adjacent to the diseased joints. Stiffness and impairment of motion are at first observed; and later, false-ankylosis, immobility, and deformity result. The surrounding muscles atrophy, and very severe neuritis is common.

The disease may be acute, sub-acute, or chronic. In the acute variety, several joints are attacked at the same time, and slight pyrexia may be present. The affected joints are more or less swollen and painful; but other acute inflammatory phenomena are usually absent. The attack subsides more or less, to recur after a varying interval.

The chronic form usually attacks but one joint at a time; usually beginning in one of the metacarpophalangeal articulations. The joint

slowly enlarges and becomes painful, active movements of the affected joints being attended by severe neuralgic pains. As the disease progresses, the wrists, ankles, elbows, knees, jaws, and spine are involved; the corresponding joints on each side of the body becoming simultaneously affected. Movement is greatly impaired, and soon the articulations become rigid. Crepitation is distinct after ulceration has destroyed the cartilages. Redness and tenderness are absent, but swelling is marked. In time the muscles become wasted, giving the joints the appearance of greater deformity and hypertrophy. Deformities are due to the disappearance of the cartilages, and to contractures of the muscles. The fingers are usually drawn backward and toward the ulnar side; and the patients lie with the thighs and legs drawn up in adduction.

There is sometimes effusion into the joints; and in addition to pain, there may be severe tingling and stinging sensations, numbness, local sweating, and marked pigmentation of the skin.

The disease tends to advance slowly; and with appropriate treatment, extended over long periods of time, it may be often held in check for years, keeping the patient in condition of comparative comfort, and able to get about with or without crutches, but the disease is considered incurable, according to the majority of medical men, and ultimately involves all the joints, and renders the patient a helpless invalid.

In a mild form of this disease, affecting middle-aged and hard-working women, there are calcareous outgrowths on the sides and distal phalanges of the fingers and toes. These outgrowths are called "Heberden's nodosities;" and it is said that persons having these nodosities, seldom have invasions of the large joints. Similar nodosities are sometimes observed in gouty conditions.

Inasmuch as early and appropriate treatment of this disease is highly essential if it is to be held in check, it is most unfortunate that so many incipient cases are mistaken for the various forms of rheumatism or gout. Many cases coming to the orthopædists are well advanced in the disease and give a history of having been treated for some months, or even years, for rheumatism.

Many of the drugs of benefit to rheumatic patients give little or no relief to cases of rheumatoid arthritis; an exception to this, is in the good effect produced in each disease, by the administration of the iodides, or iodine, especially in the use of soluble iodine.

Orthopædists have pointed out certain differential features between rheumatoid arthritis and articular rheumatisms or gout.

Chronic articular rheumatism lacks the marked structural changes and the progressive involvement of joint after joint.

Gout differs from rheumatoid arthritis in the deposits of urate of sodium in the joints, the ears, tips of the fingers, and the bursæ over the olecranon-process of the elbow, the presence of abundant uric acid in the blood, and the decided history of acute paroxysms.

Gonorrheal rheumatism, so-called, has symptoms akin to rheumatoid arthritis, but the patient suffering from this disease has also a history of local infections and discharges.

Paralysis agitans has been mistaken for rheumatoid arthritis, in cases where the tremor and characteristic gait were absent, and only the joints were examined.

Many physicians are agreed that if early and appropriate treatment is instituted, the prognosis of rheumatoid arthritis is quite favorable, and that the disease may be held in check for years, but if pronounced structural changes have begun, the disease is incurable, although it may remain stationary for a long time.

A variety of treatment has been advocated, but all measures are directed toward improving the general nutrition and health. General hygienic measures should be carefully followed, and the diet should be one easily digested and assimilated, but nutritious and mixed. Usually no red meats, very starchy foods, shell-fish, or very acid fruits, as grapes, cherries, currants, lemons, or the fruits having "pits" are allowed. The amount of sugar should be limited, and fried foods prohibited. Some doctors have observed that tomatoes cause, or seem to cause, an aggravation of the joint conditions. Some patients cannot eat any of the citrus fruits without suffering fresh exacerbations of their disease. In arthritis of a presumably auto-infectious nature, some doctors think highly of the effects of buttermilk, or lactic acid tablets.

In consideration of the fact that many orthopædists believe that intestinal auto-intoxications are responsible for many acute joint-inflammations, it would be very interesting to most nurses to read "The Nature of Man" by Professor Elie Metchnikoff, and Professor Carl von Noorden's monograph, "The Acid Autointoxications."

Massage of the joints and spine with cod-liver oil has been considered beneficial in some cases, and one-inch-square cantharidal blisters, applied over the large joints every week or ten days, has frequently afforded a reduction of swelling, pain, and stiffness.

Among the drugs given to arthritis cases may be mentioned iron, neutral bromide of quinine, guaiacol carbonate, arsenic, soluble-iodine,

salicylates, thymus extract, and strychnine. All medication and treatment must be continued over a long period of time, usually, before any marked benefit is noted.

Dr. P. W. Nathan, of New York, claims to have secured definite and, in some cases, striking improvement in his arthritic cases by the administration of thymus extract. At last reports he had records of 106 cases under observation for three months or longer. Eighty-three of these were severe, and eighteen were bed-ridden. Of these last, eight are now walking without cane or crutch, three are walking with a cane, and two with crutches; and two of those still in bed are beginning active and passive motions. Of fourteen wheel-chair patients, results are unknown in four cases, but three are walking without assistance, two are walking with a cane, in two the joints are free from pain, and three have died. Of the remaining fifty-one severe cases, practically all are improved, though in eleven the final result is not known. Thirty-three of the remainder have been feeling practically well for a year or more; and in only seven was the treatment entirely unsuccessful. He has used thymus extract—giving from two to four tablets of 5 grains each, three times daily, either before or after meals. How thymus acts upon arthritic joints, he does not pretend to know, nor does he believe it a specific, but he considers it certain that if the drug is taken for a long time, and used in connection with general hygienic treatment, marked improvement will follow.

The iodides, or soluble iodine, are used extensively in the treatment of chronic rheumatism and rheumatoid arthritis, with some excellent results. The theory in regard to the action of iodine is this: after becoming liberated in the tissues, iodine very quickly passes through the protoplasm of the body, and sharing in its metabolism by combining with the albuminous molecules, no doubt accelerates tissue-changes. Certain poisons which have intimately associated themselves with the albuminous structures are disengaged from these combinations by the iodine, and are swept out of the tissues. In view of the almost marvellous way in which iodine deals with the virus of syphilis, and with certain metallic poisons as lead and mercury, it is not unreasonable to suppose that it will likewise be useful against the poisons which produce rheumatism and arthritis.

While nurses, of course, never prescribe these treatments, it is interesting for them to learn the theories upon which they are based, and I contend that a nurse who has such knowledge is better fitted to give her patients an intelligent supervision and care.

Hydrotherapy, solar-rays, electric-light baths, vibration-treatment, seasalt-rubs, hot-packs, medicated baths, massage, and mechanical-movement treatments, such as "Zander," have been useful when given under the strict supervision of a physician skilled in orthopedic work, but should never be given except as ordered and directed by a competent doctor. Certain treatments that would benefit some types or stages of the disease might do incalculable harm if given in other stages. Only a physician is competent to judge of the structural changes that exist in the joints. In advanced cases the ends of the bones are soft and friable, and forcible manipulation or extension may cause fractures and other serious injury. This is a point to be impressed on nurses or mechano-therapists, who undertake the treatment of these cases.

Patients suffering from acute exacerbations, especially in the joints of the legs, should not be allowed to be about actively; rest is very important, and local protections of the joints are sometimes necessary. Fixation-splints are sometimes used, with relief of pain, and prevention of deformity.

Occasionally a patient is seen who has, at intervals, considerable trouble in deglutition, the food or drink being regurgitated through the nose. There is usually a severe spinal arthritis as the primary cause of this, and there is a form of neuritis in the nerves supplying the muscles of deglutition, this being dependent on the spinal condition.

Spinal arthritis is said to be the cause of the angina, intercostal neuralgia, digestive disturbance, weak heart, and the distressing dyspnoea, so often observed in advanced and crippled rheumatoid arthritis cases.

Heredity undoubtedly is a factor; therefore those who have had relatives afflicted with the disease, should try in every way to avoid the other predisposing causes. Rheumatic and arthritic patients should not take cold baths, or swim or bathe in cold, salt or fresh water.

In the early stages of the disease, hot-air or "baking" treatments combined with massage have seemed in many instances to be of great benefit. The hyperæmic action of the dry heat seems to do good by intensifying the solvent properties of the blood; thus dissolving blood clots, granulations in the joints, joint-effusions, and nodules in the tendons. Such treatment is very analgesic, and increases motility, reduces swelling, decreases crepitations, and greatly benefits or cures the attendant neuritis. Solar-rays, electric-light-baths, hot-packs, and hot, medicated-baths, if carefully given, and the after-chilling of the patient avoided, give practically the same results as hot-air treatments.

In chronic cases, renal and cardiac complications are common, and

elimination is at all times faulty. Thus it will readily be understood why exposure to cold and chilling should at all times be avoided. The skin, kidneys, and bowels should be kept active; this is very important. Flannel underwear and nightrobes should be worn in cool weather.

It is a peculiarity of this disease that patients are not affected by changes from dry to humid climate, as are rheumatics, but they are very sensitive to changes in temperature, exposure to cold or chilling causing severe neuralgic pains, or even causing a fresh exacerbation of their disease.

In acute cases, after the severe symptoms subside, active and passive movements are of benefit, but massage and mechanical movements are not as a rule adapted to any of the well-advanced chronic cases; indeed, such treatment only aggravates the trouble.

The general duties of nurses in charge of such cases may be summed up as follows: Surround the patients by hygienic conditions; pay especial attention to the diet, and to the eliminative functions; avoid all exposure to cold and chilling; shield them from mental worry, be very careful and gentle in giving treatments to, or in lifting and handling chronic cases; be alert to all symptoms, and prompt and exact in reporting the same. And withal, be kind and sympathetic toward the sufferers from this dread disease, for they are the victims of a grievous burden.

THE HEALTH OF WOMEN WAGE EARNERS

HEALTH is a social question and must be dealt with by government. The regulation of the scale of wages of women by the state is a step toward the preservation of the health of the worker. Those who insist on trying to bolster up the morals of the vast army of workingwomen, must first turn their attention to the physical welfare of these women. Mary Ann must have before her the ideal of pure womanhood, but Mary Ann must eat and be warm and have a roof over her head in order to *protect* that womanhood. Nor must she become a mother who is a beast of burden, a weary, bedraggled servant of a parasitic trade. Two children out of every four or five die before the age of five years. If the mothers can be given a little more comfort and a very little more leisure, we shall not find it necessary to raise the cry of race suicide in the streets.—From “Woman and the Wage Question,” by Jeanne Robert, in the *American Review of Reviews* for April.